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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,563	03/23/2001	Shunpei Yamazaki	SEL 248	9704

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EXAMINER

MACCHIAROLO, PETER J

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/815,563

Applicant(s)

YAMAZAKI ET AL.

Examiner

Peter J Macchiarolo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,13-16,18 and 30-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,13-16,18 and 30-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The reply filed on 02/09/2004 consists of changes to the specification, drawings, and to the claims, and further, the reply consists of remarks related to the prior rejection of claims in the previous Office Action. The above have been entered and considered. However, pending claims 1-4, 6, 13-16, 18, and 30-48 are not allowable as explained below.

Claim Objections

2. Claim 1 is objected to because of the following informalities:

3. The claim recites, “a light emitting apparatus having a plurality of light emitting elements over an insulator, the light emitting element comprising.” This is unclear. The Examiner reads, “a light emitting apparatus having a plurality of light emitting elements over an insulator, each of the light emitting elements comprising.” Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-4, 6, 13-16, 18, 30-37, 39-42, and 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe et al (USPN 6479930; “Tanabe”).**

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5. In regards to claim 1, Tanabe shows in figures 6 and 8, a light emitting element comprising a first electrode (22) having at least a first edge (bottom) and a second edge (top) formed over the insulator (21), at least one wiring (29) interposed between the insulator and the first electrode wherein the wiring is formed in contact with the first edge of the first electrode, an insulating film (24) covering at least the first and second edges of the first electrode, a second electrode (25) formed over the insulating film, and a luminescent material (23) interposed between said first and second electrode.

6. Tanabe is silent to the first and second electrodes being an anode and cathode, respectively.

7. However, one of ordinary skill in the art will realize that Tanabe infers that the first and second electrodes are configured to alternate between anodes and cathodes, since the device runs on AC power¹.

8. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Tanabe's device with the first and second electrodes being anodes and cathodes, respectively, to allow for a device operating on DC power.

9. The Examiner notes that the limitation in the preamble of claims 1, 13, 34, 39, and 44, "having a plurality of light emitting elements," has not been read into the body of the claim since it merely recites the intended use of a structure, and has therefore not been given patentable weight. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Furthermore, Applicant is advised that if the claim

¹ Tanabe, abstract.

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is amended to properly recite this limitation, it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Pater Co. v. Bemis Co.*, 193 USPQ 8.

10. Regarding claims 2-4, 14-16, 30-33, 35-37, 40-42, and 45-47, Tanabe discloses that the wirings are formed from a silver metal film and the first electrodes are formed of electrically conductive oxide films.²

11. Although Tanabe is silent to the exact resistance of these materials, the Examiner notes it is well known in the art that the silver metal film has a lower resistance than the conductive oxide film.

12. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Tanabe, with the silver metal film has a lower resistance than the conductive oxide film, since this is a well known correlation of resistances.

13. Regarding claims 6 and 18, Tanabe further discloses that an electric device uses an apparatus according to claim 1.³

14. Regarding claim 13, Tanabe shows in figures 6, 7, and 8, a light emitting element comprising a first electrode (22) having at least a first edge (bottom) and a second edge (top) formed over the insulator (21), and the first electrode extending in a first direction, a first wiring

² Tanabe, col. 8, l. 60, to col. 9, l. 4.

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(29) interposed between the insulator and the first electrode wherein the wiring is formed in contact with the first edge of the first electrode and extends in the first direction, an insulating film (24) covering at least the first and second edges of the first electrode, a second electrode (25) formed over the insulating film, and a luminescent material (23) interposed between said first and second electrode.

15. Tanabe is silent to the first and second electrodes being an anode and cathode, respectively, and is silent to a second wiring.

16. However, one of ordinary skill in the art will realize that Tanabe infers that the first and second electrodes are configured to alternate between anodes and cathodes, since the device runs on AC power. Further, it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Pater Co. v. Bemis Co.*, 193 USPQ 8, and one would be motivated so such a configuration to decrease the response time and power needed to form a discharge between the electrodes.

17. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Tanabe's device with the first and second electrodes being anodes and cathodes, respectively, and with a second wiring in contact with the second edge of the anode, a to allow for the device to operate on DC power and to allow the anode to be thoroughly electrified over the entire device.

³ Tanabe, col. 5, ll.23-26.

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18. Regarding claim 34, Tanabe discloses and teaches all of the limitations at numbered paragraphs 14-17 (above), and further that the first and second electrodes are electrically connected to driver circuits.⁴

19. The Examiner notes that, “mounted by a COG system” is an intended use type limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

20. Regarding claims 39 and 44, Tanabe discloses and teaches all the limitations in numbered paragraph 18 (above), with the exception of the first and second driver circuits are first and second stick drivers connected to the corresponding electrode through an anisotropic electrically conductive material, or by a wire.

21. However, one of ordinary skill in the art would arrive at connecting first and second stick drivers to the anode and cathode through anisotropic electrically conductive material, or by a wire, since it is known that a first and second stick driver being connected to an anode and cathode will properly drive the device, and an anisotropic electrical connection can be easily formed. Further, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

⁴ Tanabe, col. 5, ll. 23-41.

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22. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Tanabe, including connecting first and second stick drivers to the anode and cathode through anisotropic electrically conductive material or by a wire to allow for easy manufacturing and proper operation.

23. **Claims 38, 43, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe, in view of previously cited Kim et al (USPN 6140765; "Kim").**

24. Regarding claims 38, 43, and 48, Tanabe is silent to a plurality of banks arranged so as to be orthogonal to the anodes.

25. However, Kim teaches this configuration allows for the anodes and cathodes to be electrical isolated from each other, which can be driven separately from the remaining groups of pixels, ultimately allowing for efficient and cost effective fabrication methods suitable for mass production.

26. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Tanabe's device with Kim's bank configuration, to allow for efficient and cost effective fabrication methods suitable for mass production.

Response to Arguments

27. Applicant's arguments filed 02/09/2004 have been fully considered but are moot in view of the new ground(s) of rejection.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

30. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

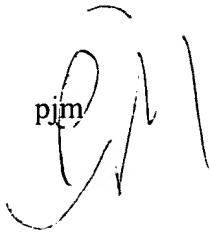
31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375. The examiner can normally be reached on 8:30 - 5:00, M-F.

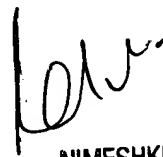
32. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

33. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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